Reservoir Operations *Study*

flood control

FACT SHEET

Impact Evaluation on Flood Control

The purpose of the study is to determine if changes in TVA's reservoir system operating policies would produce greater overall public value.

Background

TVA is conducting a formal evaluation of its policies for operating the Tennessee River reservoir system, including an analysis of the economic impacts of any potential changes in these policies. Existing policies affect how much reservoir levels fluctuate, when changes in reservoir levels occur, and the amount of water flowing through the reservoir system at different times of the year, depending on rainfall.

The purpose of the study is to determine if changes in TVA's reservoir system operating policies would produce greater overall public value. Technical analyses will be performed to evaluate the impacts of TVA's current policies and the potential impacts of alternatives on a number of resource areas and other issues.

The two-year Reservoir Operations Study (ROS) is scheduled for completion in October 2003.

The impacts on Flood Control will be evaluated as part of the ROS, and the results will be documented in an Environmental Impact Statement (EIS). TVA will conduct the study in accordance with National Environmental Policy Act (NEPA) requirements.

Potential Impacts

- Changes in reservoir operating policies may alter the amount of floodwater storage space available in TVA reservoirs. Influencing the capacity of reservoirs to safely collect water in certain seasons could impact TVA's ability to control flooding and flood-related damage at numerous locations in the Tennessee Valley.
- The objective of floodplain management is to minimize flood damage, minimize the risk to people in the floodplain, and ensure that development is consistent with local floodplain regulations. On TVA reservoirs, any proposed development is reviewed by TVA staff to ensure that it is located above or protected to the 500-year flood level. Downstream of the dams, where TVA has no land rights that would help control development, TVA depends on local floodplain regulations.
- The annual lowering of reservoir levels provides storage space for water during the flood season, from mid-December through early April. The city of Chattanooga is the major flood-damage center in the Tennessee Valley.
- It is expected that some alternatives to be considered could increase or decrease the reservoirs' storage capabilities for some portion of the year, resulting in an increased flood risk.

Geographic Areas

- TVA's floodplain management efforts focus on the lands under TVA stewardship, as well as the floodplains along the rivers and streams affected by the regulation of TVA dams. More than 300 communities in the Tennessee Valley have some degree of flood risk and damage potential.
- The region of influence will include TVA reservoirs and river reaches downstream of TVA dams, as well as major flood-damage centers within the Tennessee Valley.

Scope of Analysis

- Analyzing potential changes in flood risk is complex because of the large number of dams and reservoirs and the large number of possible sites affected by any proposed changes in operations.
- Topography and variations in rainfall and seasonal runoff throughout the Tennessee Valley contribute to the complexity, as do the multiple purposes for which the entire system is managed.
- A comprehensive hydrologic study will be completed for the ROS. It will be designed to determine changes in the frequency of water flow, average annual flood damage, and flow and elevation duration curves at critical locations. The analysis will be executed primarily through detailed computer simulations of the TVA reservoir system for a continuous period of almost 100 years.
- The hydrologic study report will include a discussion of the potential impacts on published Federal Emergency Management Agency flood data at the community level throughout the Valley.
- Data are also required to simulate the movement of water through systems of rivers and reservoirs. Simulated water discharges and reservoir elevations will be used to generate the information needed to demonstrate changes between a benchmark and proposed alternatives.

For More Information

To submit comments or get additional information, members of the public are invited to visit TVA's Web site at www.tva.com, to call toll-free 888-882-7675, to fax TVA at 865-632-3146, or to write to ROS Project Manager David Nye, Tennessee Valley Authority, c/o WT 11A, 400 West Summit Hill Dr., Knoxville, TN 37902.